THE ANALYSIS OF PUBLIC HEALTH USING THE URBAN AUDIT DATA

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Background and aims: The aim of the paper is to analyse selected public health indicators based on the Urban Audit database. The Urban Audit contains statistics for 258 cities across 27 European countries. There are almost 300 statistical indicators on demography, society, the economy, the environment, transport, the information society, public health, and leisure. In this paper, we analyse the following public health indicators: mortality rates under 65 and mortality rates under 65 from heart diseases and respiratory illness for both sexes. We are interested in the effect of the environment (air pollution) and active travel (the shares of walkers and bikers) on the above mentioned health indicators.
Methods: We employ statistical bayesian techniques to analyse the impact of observed cities characteristics and unobserved random effects on the public health indicators. The bayesian techniques prove useful to deal with missing data and outliers, which is a real issue when working with the Urban Audit.
Results and conclusions: The statistical results suggest that the share of active transport is significantly associated with the decrease in all investigated mortality rates. The elasticity is stronger for the share of bikers. There is also a non-linear interactions between environmental and transport indicators. We plan to check these results using a set of more advanced techniques.